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EP 600  
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Presentation to Canadian Environmental Council on Environmental Protection Service





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by Backlund

Mr. Chairman, Members of the Canadian Environmental Advisory Council, I welcome this opportunity to speak to you to-day about the Environmental Protection Service PRESENTATION

to

All of you know, better than I, just how sweeping the changes in attitudes toward the environment have been within the last three years.

CANADIAN ENVIRONMENTAL COUNCIL

who would have thought three years ago that we would have a major international conference putting forward sweeping recommendations like those

ENVIRONMENTAL PROTECTION SERVICE

which came from Stockholm. Who would have thought that there would be such enormous changes in institutions throughout most major countries of the world for dealing with environmental problems. For years we heard

by

cries of concern from individual citizens, then citizens' groups. Now we're seeing action. Action

K.C. LUCAS

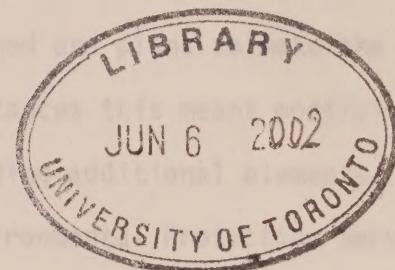
Assistant Deputy Minister

Environmental Protection Service

Department of Environment

The Department of the Environment was created officially on June 10, 1971 with approval of Bill C207. Sometime before this, however, the broad organization of the Department had been built and the broad organization a reality were in motion. In most instances this was an existing organization, or organizations by adding environmental elements taking away some. With EPS however - The Environmental Protection Service - a complete new concept was introduced, and nucleus groups only were available to build the organization.

Because EPS is now, it is the most asked about organization in the Department; at the same time it's also the least understood element.





To: The Canadian Environmental Advisory Council

Departmental Background

EPS is an organization of the Canadian Environmental Advisory Council, I welcome this opportunity to speak to you to-day about the Environmental Protection Service.

All of you know, better than I, just how sweeping the changes in attitudes toward the environment have been within the last three years. Who would have thought three years ago that we would have a major international conference putting forward sweeping recommendations like those which came from Stockholm. Who would have thought that there would be such enormous changes in institutions throughout most major countries of the world for dealing with Environmental problems. For years we heard cries of concern from individual scientists, then citizens' groups. Now we're seeing action. Action on a big scale.

SLIDE 1

The Department of the Environment was created officially on June 10, 1971 with approval of Bill C207. Sometime before this, however, the broad organization of the Department had been outlined and plans to make the organization a reality were in motion. In most instances this meant modifying an existing organization, or organizations by adding additional elements, or taking away some. With EPS however - The Environmental Protection Service - a complete new concept was introduced, and nucleus groups only were available to build the organization.

Because EPS is new, it is the most asked about organization in the Department; at the same time it's also the least understood element.

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Part of this paradox lies in understanding the Department itself. - its origins and purpose. By the same token the Department itself can only be understood well if there is a general understanding of EPS. The creation of EPS is an organizational response to the environmental problem, in particular and is probably analogous to the cause - effect relationships which may be found in biological systems.

~~Resources are those relating with environmental elements - land, air and water were essential ingredients of any environmental department. Together, these make up the ecosystem, the interdependent system of living things and life~~

~~My talk will focus on: preservation or enhancement of our natural environment~~

~~is only possible if the essential relationships in the system are broadly understood. Preservation of any living resource means preservation and management of its environment.~~

- Why we exist and how we are organized
- What we have done so far
- what we are doing or going to do soon

SLIDES 24 & 25

Within the Government recognized that there was this interdependency between renewable resources and their environments, it also recognized the inherent conflict between development and exploitation of non-renewable resources and the preservation of environmental values. For this reason non-renewable, non-living resources were excluded. This choice was deliberate. The Prime Minister emphasized that "tradeoff" decisions between exploitation of non-renewable resources and preservation of the Environment should be made by Ministers at the Council Table, and not by officials. Thus an extremely important principle was established. In addition, the gravity of the problem of degradation of the environment was emphasized.

Gathering within Environment Canada the capability that was formerly scattered in six different Departments also overcame fragmentation of Federal Government environmental management responsibilities.



### Departmental Origin

In the speech from the Throne, and the debate on it, it was recognized clearly that the major elements in the Government dealing with renewable resources and those dealing with environmental elements - land, air and water were essential ingredients of any environmental department. Together, they form the ecosystem, the interdependent system of living things and life support elements. True preservation or enhancement of our natural environment is only possible if the essential relationships in the system are broadly understood. Generally, wise management of any living resource means preservation and management of its "environment".

of the interdependency between the resource and the environmental elements is highlighted.

### SLIDES 3A & 3B

It is generally recognized that the cause of many environmental problems is While the Government recognized that there was this interdependency between renewable resources and their environments, it also recognized the inherent conflict between development and exploitation of non-renewable resources and the preservation of environmental values. For this reason non-renewable, non-living resources were excluded. This choice was deliberate. The Prime Minister emphasized that "tradeoff" decisions between exploitation of non-renewable resources and preservation of the Environment should be made by Ministers at the Council Table, and not by officials. Thus an extremely important principle was established. In addition, the gravity of the problem of degradation of the environment was emphasized.

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Founding Concept of EPS

- Our organizational concept attempts to pull together the basic philosophies/<sup>used</sup> in creating the Department and to reflect them in its organization.
- The fundamental concept of course is that protection of the environment involves protection of all its elements. We believe EPS must be able to take an integrated view of problems and have problem solving capability. For this reason it is an integrated organization. We are concerned with protecting living resources as well as air, water and land. Wherever possible, standards, requirements or regulations rely on biological criteria. Again the importance of the interdependence between the resource and the environmental elements is highlighted.
- It is generally recognized that the cause of many environmental problems is man's technology. Man's technology is also the answer to these problems. Therefore, EPS has stressed the technological expertise to detect, identify, solve and follow up on problems.
- Much of Canada's new legislation stresses preventative measures. We believe that prevention is better than cure, and our organization attempts to stress prevention of problems as well as their cure.
- We recognize that the role of the provinces is important and essential. Federal/provincial actions should be complimentary and mutually supportive and conflict must be avoided or at least minimized.



Not only is EPS based on the integration of capability but it also provides a focal point for industry, for other levels of government and for the public on environmental protection.

It also provides a single point of contact on all regulatory matters for the Department and so avoids ambiguous or contradictory information to industry, the public and other levels of government.



SLIDE 5

Organization of EPS

An organization is simply a logical grouping of activities to meet needs or objectives. Our policy and program development is centred at Headquarters to provide a broad framework for action. Our program implementation is done through our five Regional Offices though, from the Atlantic to the Pacific.

Within EPS we are concerned with all environmental elements, but our water and air pollution control programs have been emphasized because of the present major concern with pollution or degradation of these two media and because the Federal Government has jurisdictional responsibilities in both instances. Further, by trapping pollutants before they enter these transporting and diffusion media we prevent them reaching their ultimate targets - living organisms. For these reasons we have established a Program for Air Pollution Control and a Program for Water Pollution Control.

The Federal Government must provide leadership in the "fight against environmental degradation" and an action Program with responsibility for Federal Activities Environmental Protection is necessary to achieve this.

The scale and frequency of emergencies in the environmental field have been increasing; many occur in areas of Federal jurisdiction; therefore there needs to be capability for ensuring an integrated response to these emergencies through predetermined, pre-agreed contingency plans. The response must be swift and sure whether the emergency arises in a Federal jurisdiction, or whether it arises in a Provincial jurisdiction and triggers a predetermined "request" for Federal assistance.



It is well known that many contaminants are persistent, their transport and conversion paths are more variable. Their targets are numerous and often innocent and unintended. An ecological perspective is needed to deal intelligently with these. Hence we have created an Ecological Protection Program to deal with contaminants and hazardous substances and also to deal with assessment and control of the environmental impact of major projects.

Solid wastes and noise are relatively new areas of concern to the Government and this Department. Their effects, control methods, even the nature of the problems are little understood. For this reason we have included capability to deal with these in the Ecological Protection Program.

We have emphasized the need for strong regional organizations, designed to deal with problems where they arise. This also provides integrated capability to mesh with and complement provincial capability at the source of problems. It also provides us with regional points of contact for industry and for the public on the problems.

#### SLIDE 5A

Here is a chart of our Organization.

I should mention that our staff is multi-disciplinary, although it draws heavily on the applied sciences, with a high proportion of ecologists and biologists also among its professional ranks. The staff has been drawn from industry, provincial agencies, universities and other Federal Departments.



SLIDES 6-7-8

Resource Allocation

The Environmental Protection Service is one of the components of the environmental quality program of the Department. It is shown as the Environmental Protection Activity in the official "Blue Book of Estimates". In 1972-73 we have a budget of 12.1 million dollars out of the 134.4 million dollars to be appropriated for the Departmental Program. We account for 9.5% of the manpower for the program (519 out of 5,468) and 8.7% of the program expenditure. These are illustrated on slides 6, 7, and 8.



## MAIN THRUSTS OF EPS PROGRAMS

### 1. Policy of Containment or Prevention

We believe that it makes sense to contain or prevent pollution wherever possible. We regard this as an essential first line of defence. We do not yet have data or capability to rely exclusively on a resource management approach to control degradation of the environment. You have heard our Minister stress control of pollution sources through use of best practicable technology. In many instances there are cases of serious pollution which must be rolled back and many new point sources to be controlled. Therefore, as the first stage in our containment policy we are developing minimum national baseline regulations on an industry-by-industry basis for water pollution control, and for air pollution control we are developing national emission regulations to control air pollution from business, works and undertakings under the Authority of the Parliament of Canada. We are developing regulations to control composition of fuels. We can prescribe national emission standards where emissions would constitute a significant hazard to health.

In our Water Pollution Control Program we expect to have most major industrial effluent sources under control by 1980.



We hope to have an average reduction of 30% in the pollution load due to automobile emissions by 1980. We expect to have active air pollution surveillance programs for 48 major centres of Canadian population measuring up to 10 different parameters of air pollution.

We expect to have in place a system for assessing all federal activities and proposed facilities in the planning stage to insure they comply with Government requirements. In addition, we will have effected a clean-up of federal facilities and on-going activities by 1978. Programs to reach agreed 1975 objectives on the Great Lakes are in place. We will have in place an emergency management centre with national contingency plans for dealing with environmental emergencies throughout Canada including cooperative arrangements worked out for border problems and transboundary problems.

New programs for solid wastes management, noise control, and protocols for control of environmental contaminants are under development now.



2. Supporting Programs to Assist Industry and Municipalities

We are presently seeking approval from government for programs of technology development and demonstration in the field of water and air pollution control and also in solid waste management.

These programs compliment our regulatory thrust of containment and should result in development of new Canadian technology for pollution control, new or improved processes in some cases, and transfer of proven foreign developments to Canadian industry.

Ultimately these programs will bring us closer to workable concepts of recycling and materials balance.

We are investigating the need and justification for Federal financial assistance where accelerated clean-up may be justifiable.

We are administering a program of accelerated capital cost allowances for capital investments which prevent, reduce or abate pollution.

We are working to improve the technology and reduce the costs of municipal sewage transport and treatment. A special program thrust at present is the development and demonstration of nutrient control technology for municipal effluents.



3. Prevention of Pollution by Attitude and Changes

Prevention of pollution by regulation and control technology are conventional means to prevent pollution. A much more powerful method in the long run is to obtain voluntary compliance with the law. The public can provide invaluable assistance to us in achieving this. A well informed public, including the industrial public, which understands the underlying philosophy and need for protection of the environment, will aid in identifying problem areas and provide a climate of public opinion that any polluter must reckon with.

We are participating in educational programs and provision of factual data to the general public to provide them with sound information on the effects of their consumption habits and disposal practices as well.

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Well, Gentlemen, that gives you some background on EPS. This next series of slides lists some of our selected accomplishments and significant on-going activities. The list is by no means complete and I would be willing to respond to any questions you have.

SLIDES 10, 11, 12 and 13



DEPARTMENTAL BACKGROUND

BILL C207 JUNE 10, 1971

## EXISTING ORGANIZATIONS

ORIGIN

WATER SECTOR

METEOROLOGICAL SERVICE

CANADA LAND INVENTORY

FORESTRY SERVICE

WILDLIFE SERVICE

FISHERIES SERVICE

FISHERIES RESEARCH BOARD

WATER SECTOR

DOE ORGANIZATIONS

WATER MANAGEMENT

ATMOSPHERIC ENVIRONMENT

LANDS, FORESTS AND WILDLIFE

FISHERIES

POLICY PLANNING

ENVIRONMENTAL QUALITY DIRECTORATE  
AIR POLLUTION CONTROL DIVISION  
PUBLIC HEALTH ENGINEERING  
WATER SECTOR WASTE TREATMENT TECHNOLOGY  
FISHERIES POLLUTION CONTROL



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## BASIC PHILOSOPHIES OF DEPARTMENT

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### SPEECH FROM THRONE

- RENEWABLE RESOURCES + LAND, AIR, WATER

- NATURAL ENVIRONMENT

- WISE RESOURCE MANAGEMENT

- PRESERVATION AND MANAGEMENT OF ENVIRONMENT



## FOUNDING CONCEPTS OF EPS

- INCORPORATES BASIC PHILOSOPHIES USED IN FORMING DEPARTMENT
- INTEGRATED VIEW OF PROBLEMS & INTEGRATED PROBLEM SOLVING CAPACITY
- TECHNOLOGICAL EXPERTISE
- PREVENTION BETTER THAN CURE
- COMPLEMENTARY AND SUPPORTIVE TO PROVINCES
- FOCAL POINT FOR INDUSTRY, OTHER GOVERNMENTS AND PUBLIC ON ENVIRONMENTAL PROTECTION



## ORGANIZATION OF EPS

### LOGICAL GROUPING OF ACTIVITIES TO MEET OBJECTIVES

#### HEADQUARTERS - (POLICY AND PROGRAM DEVELOPMENT)

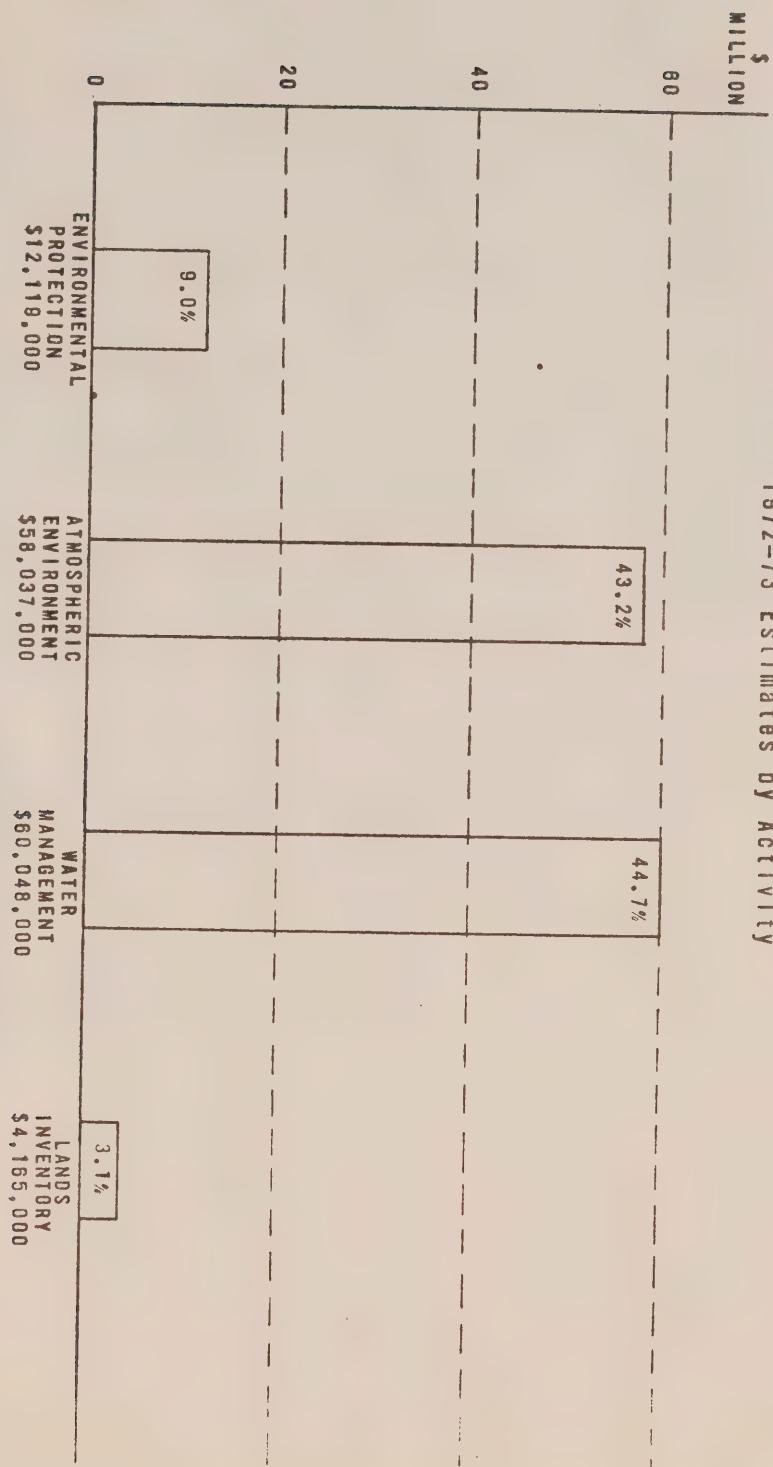
- AIR POLLUTION CONTROL PROGRAM
- WATER POLLUTION CONTROL PROGRAM
- FEDERAL ACTIVITIES PROTECTION PROGRAM
- ENVIRONMENTAL EMERGENCIES PROGRAM
- ECOLOGICAL PROTECTION PROGRAM

#### REGIONS - PROGRAM IMPLEMENTATION

- PACIFIC (VANCOUVER)
- NORTHWEST (EDMONTON)
- ONTARIO (TORONTO)
- QUEBEC (MONTREAL)
- ATLANTIC (HALIFAX)



ENVIRONMENTAL QUALITY PROGRAM  
1972-73 Estimates by Activity

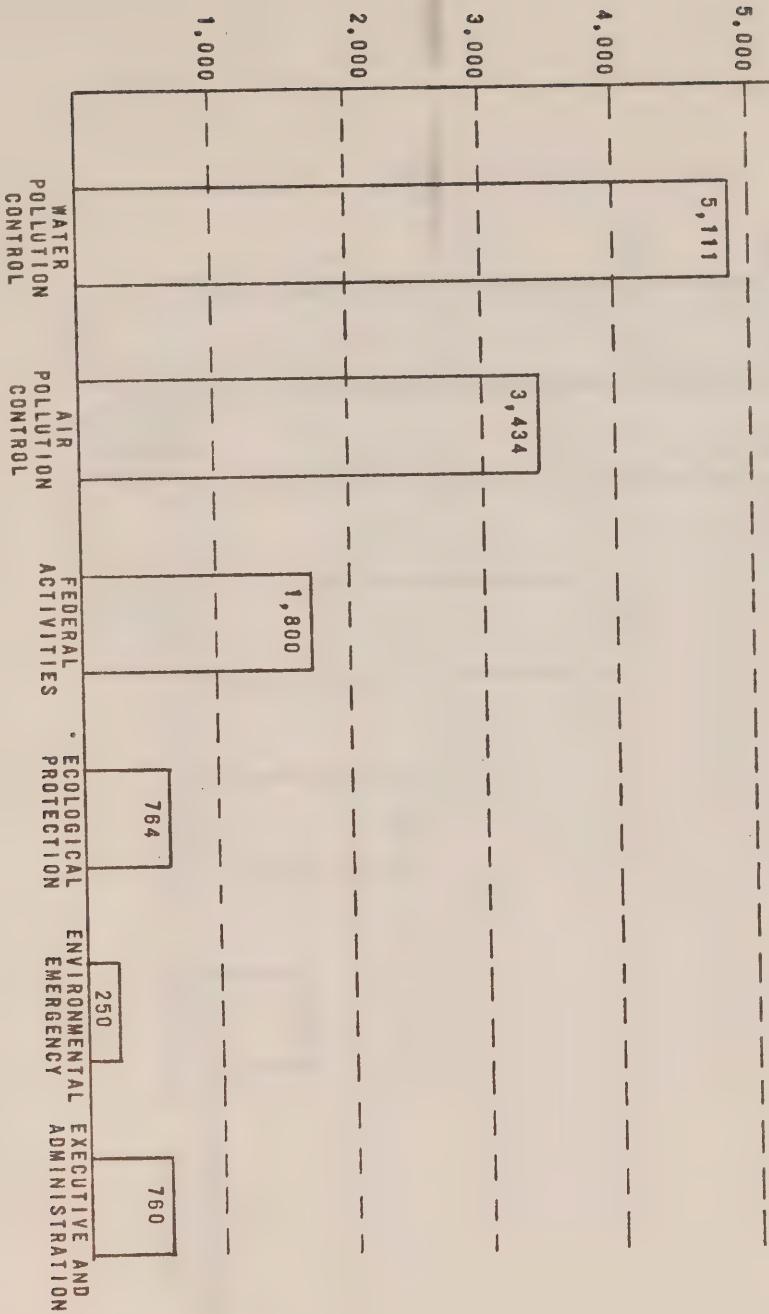


\*Total Expenditures \$134,405,000



\$'000's  
ENVIRONMENTAL PROTECTION SERVICE

1972-73 Estimates by Sub-Activity

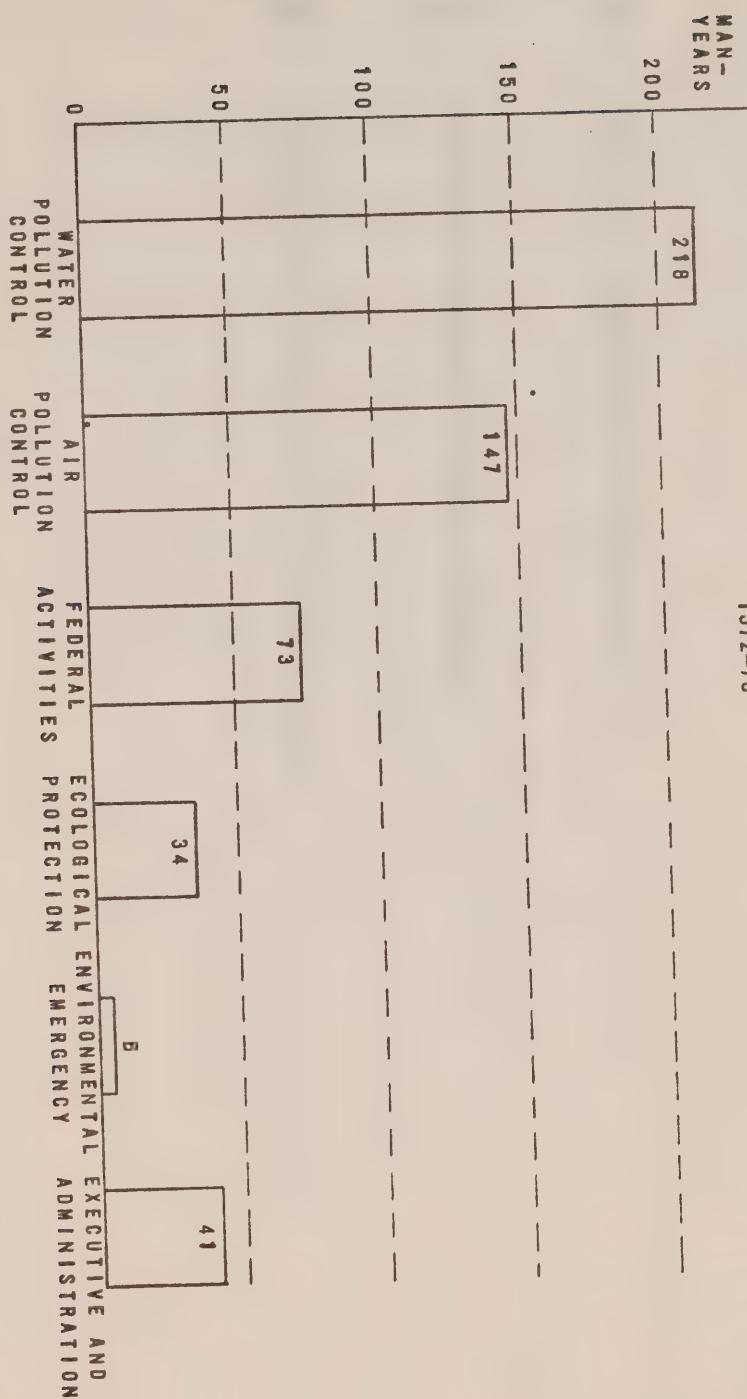


\*Total Expenditures \$12,119,000



ENVIRONMENTAL PROTECTION SERVICE  
Estimated Manpower by Sub-Activity

1972-73



\*Total Man-Years 519



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## MAIN THRUSTS

POLICY OF CONTAINMENT OR PREVENTION

SUPPORTIVE PROGRAMS TO ASSIST INDUSTRY

PREVENTION OF POLLUTION BY ATTITUDE CHANGES

REVIEW OF EDITION OF WILLIAM COWEE

INFLUENCE OF 10 YEARS INFLUENCE

OF COWEE ON COWEE

HIGHLIGHTS OF ENVIRONMENTAL PROTECTION SERVICE ACCOMPLISHMENTS

WATER POLLUTION CONTROL

- NATIONAL BASELINE PULP AND PAPER EFFLUENT REGULATION IN FORCE, SUPPLEMENTARY GUIDELINES ISSUED
- NATIONAL BASELINE CHLOR-ALKALI EFFLUENT REGULATIONS IN FORCE.
- PETROLEUM REFINERIES EFFLUENT REGULATIONS UNDER DEVELOPMENT,
- FISH PROCESSING EFFLUENT GUIDELINES ISSUED. WASTE CHARACTERIZATION STUDY TO BE COMPLETED SUMMER 1972,
- MINING EFFLUENT REGULATIONS FOR SIX INDUSTRY SECTORS UNDER DEVELOPMENT, INDUSTRY-GOVERNMENT TASK FORCE TO BE ESTABLISHED SEPTEMBER 1972.
- THIRTEEN OTHER INDUSTRIES SCHEDULED FOR REGULATION.
- DISCUSSIONS ON APPLICATION OF POLLUTION CONTROL REGULATIONS UNDER FISHERIES ACT WITH ALL PROVINCES.
- MINISTERIAL ACTION UNDER NEW POWERS OF FISHERIES ACT ON COME-BY-CHANCE REFINERY.
- POLLUTION ABATEMENT COST ANALYSIS OF PULP AND PAPER INDUSTRY



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WATER (CONT'D.)

• GREAT LAKES CLEAN-UP PROJECTS SCHEDULED FOR IMPLEMENTATION PURSUANT TO CANADA-UNITED STATES AGREEMENT (10 PROJECTS) AND CANADA-ONTARIO AGREEMENT (6 PROJECTS)

• NEW WASTE TREATMENT TECHNOLOGY AND DEMONSTRATION PROGRAM FOR CABINET CONSIDERATION

• PARTICIPATION IN INTERDEPARTMENTAL REVIEW AND RECOMMENDED CHANGES TO FEDERAL ASSISTANCE FOR MUNICIPAL SEWAGE PROJECT

• REPRESENTATION ON OECD WORKING GROUPS ON MERCURY, TREATMENT PROCESSES, PULP AND PAPER

• JOINT PROJECTS WITH PROVINCES: BRIEFS TO BRITISH COLUMBIA ON PULP AND PAPER, MINING, CHEMICAL AND PETROLEUM INDUSTRIES; SAINT JOHN RIVER BOARD; PHOSPHORUS REDUCTION AT FOUR D.N.D. BASES IN ONTARIO; MINE WASTEWATER TREATMENT PILOT PLANT



## AIR POLLUTION CONTROL

- NATIONAL AIR QUALITY OBJECTIVES GAZETTED
- FEDERAL PROVINCIAL COMMITTEE ON AIR POLLUTION ESTABLISHED
- MOTOR VEHICLE EMISSION REGULATIONS
- MOTOR VEHICLE TEST FACILITY
- EXPANSION OF (FEDERAL/PROVINCIAL) AIR POLLUTION SURVEILLANCE NETWORK
- POLLUTION SOURCE INVENTORY - INDUSTRIAL POLLUTANTS, FEDERAL GOVERNMENT
- SPECIAL SURVEYS
- COOPERATIVE PROGRAMS WITH PROVINCES
- IJC INVOLVEMENTS
- REGULATIONS - COMPOSITION OF FUELS, FEDERAL OPERATIONS,



## FEDERAL ACTIVITIES PROTECTION

- CABINET APPROVAL OF NEW PROGRAM FOR CLEAN-UP AND PREVENTION OF POLLUTION
- NATIONAL FEDERAL SOURCES INVENTORY UNDER DEVELOPMENT
- CRITERIA AND SCREENING SYSTEM BEING DEVELOPED
- CLEAN-UP PROGRAM FOR DOE FACILITIES - 10 PROJECTS UNDER WAY 21 IN PLANNING STAGES
- PROGRAM PLANNING ON CLEAN-UP OF 1,000 FISHING VESSELS, HAZARDOUS LABORATORY WASTE INVENTORY; FACILITY PLANNING UNDER WAY.



## ECOLOGICAL PROTECTION

NATIONAL CAPITAL REGION PILOT PROJECT ON SOLID WASTES MANAGEMENT

OFFSHORE PETROLEUM DEVELOPMENTS

PIPELINE RELATED STUDIES AND ASSESSMENTS

LORNEVILLE DEVELOPMENT - CONTROL OF IMPACT

JOINT STUDY WITH QUEBEC ON MERCURY IN NORTHWESTERN QUEBEC

SOLID WASTES - NATIONAL STUDY

PROPOSAL TO CABINET ON NATIONAL SOLID WASTES PROGRAMS UNDER DEVELOPMENT.  
STUDY ON FEDERAL ROLE IN NOISE CONTROL COMPLETED AND NATIONAL ACOUSTIC  
AND NOISE CONTROL REFERENCE SYSTEM DEVELOPED.

ASSESSMENT OF POTENTIAL BIOLOGICAL EFFECTS OF DDT IN COOPERATION WITH  
NATIONAL HEALTH AND WELFARE AND WATER MANAGEMENT SERVICE

DISPOSAL OF HAZARDOUS SUBSTANCES (PARATHION, DDT, MERCURY DREDGE SPOILS)  
AND CONTINGENCY STOCKPILING OF DDT POWDERS

CROSS MISSION TASK FORCE PARTICIPATION - CONTAMINANTS; ENVIRONMENTAL  
IMPACT; JAMES BAY IMPACT STUDIES; MARITIMES OIL EXPLORATION; AD HOC  
GROUP WEST COAST OIL TANKERS; CADMIUM.



## ENVIRONMENTAL EMERGENCIES

- NATIONAL ENVIRONMENTAL EMERGENCY PLANNING DOCUMENT AND ORGANIZATION BEING READIED FOR EARLY CABINET CONSIDERATION,





